



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/553,011

06/26/2006

Heiko Hessenkemper

117040.00089

6761

21324 7590 05/07/2010

HAHN LOESER & PARKS, LLP

One GOJO Plaza

Suite 300

AKRON, OH 44311-1076

EXAMINER

HOFFMANN, JOHN M

ART UNIT

PAPER NUMBER

1791

NOTIFICATION DATE

DELIVERY MODE

05/07/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patents@hahnlaw.com

akron-docket@hotmail.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/553,011	<b>Applicant(s)</b> HESSENKEMPER ET AL.	
	<b>Examiner</b> John Hoffmann	<b>Art Unit</b> 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2,6-10,14-17,19 and 20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2,6-10,14-17,19 and 20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/22/2009 has been entered.

### ***Claim Rejections - 35 USC § 103***

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 1791

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 2, 6-10 and 14-17 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Geertman 5213599 in view of Doremus ("Glass Science", page 102)

See col. 2, lines 3-4 and line 40 of Geertman. Geertman does not disclose the composition of the glass, however at col. 2, lines 3-5, Geertman discloses the inclusion of alkali and/or alkaline earth ions in the tube glass. As per Doremus, sodium and aluminum are commonly found ingredients in "Important Commercial Silicate Glasses". Thus one of ordinary skill, when reading the Geertman reference would immediately envision the use of sodium aluminosilicate glass. Thus aluminosilicates were formed.

Examiner notes neither the term "alumosilicates" nor how they were created is described in the present application. As far as Examiner can tell from the Internet, some consider "alumosilicate" to be the  $AlSiO_4$  anion, others consider it to be a misspelling of "aluminosilicate". Examiner finds that the broadest reasonable interpretation of the term "sodium alumosilicate", encompasses any material having sodium, aluminum and silica together. It is noted that since it would have been obvious

Art Unit: 1791

that the glass material would have sodium and silica, when one deposits the aluminum oxide, such would be bound to the silica and sodium on the inner surface of the glass tube, thus creates a sodium aluminosilicate interface region between the pure glass and the pure coating. Such being modified by the aluminum oxide deposit and thus the aluminum itself.

It is noted that Geertman exposes glass to the same gas as applicant and at the same temperature (present claim 8), thus one would expect the same result.

#### **From MPEP 2145**

##### **II. ARGUING ADDITIONAL ADVANTAGES OR LATENT PROPERTIES**

Prima Facie Obviousness Is Not Rebutted by Merely Recognizing Additional Advantages or Latent Properties Present in the Prior Art

Mere recognition of latent properties in the prior art does not render nonobvious an otherwise known invention. In re Wiseman, 596 F.2d 1019, 201 USPQ 658 (CCPA 1979) (Claims were directed to grooved carbon disc brakes wherein the grooves were provided to vent steam or vapor during a braking action. A prior art reference taught noncarbon disc brakes which were grooved for the purpose of cooling the faces of the braking members and eliminating dust. The court held the prior art references when combined would overcome the problems of dust and overheating solved by the prior art and would inherently overcome the steam or vapor cause of the problem relied upon for patentability by applicants. Granting a patent on the discovery of an unknown but inherent function (here venting steam or vapor) "would re-move from the public that which is in the public domain by virtue of its inclusion in, or obviousness from, the prior art." 596 F.2d at 1022, 201 USPQ at 661.); In re Baxter Travenol Labs., 952 F.2d 388, 21 USPQ2d 1281 (Fed. Cir. 1991) (Appellant argued that the presence of DEHP as the plasticizer in a blood collection bag unexpectedly suppressed hemolysis and therefore rebutted any prima facie showing of obviousness, however the closest prior art utilizing a DEHP plasticized blood collection bag inherently achieved same result, although this fact was unknown in the prior art.).

"The fact that appellant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious." Ex parte Obiaya, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985) (The prior art taught combustion fluid analyzers which used labyrinth heaters to maintain the samples at a uniform temperature. Although appellant showed an unexpectedly shorter response time was obtained when a labyrinth heater was employed, the Board held this advantage would flow naturally from following the suggestion of the prior art.). See also Lantech Inc. v. Kaufman Co. of Ohio Inc., 878 F.2d 1446, 12 USPQ2d 1076, 1077 (Fed. Cir. 1989), cert. denied, 493 U.S. 1058 (1990) (unpublished — not citable as precedent) ("The recitation of an additional advantage associated with doing what the prior art suggests does not lend patentability to an otherwise unpatentable invention.").

Art Unit: 1791

In re Lintner, 458 F.2d 1013, 173 USPQ 560 (CCPA 1972) and In re Dillon, 919 F.2d 688, 16 USPQ2d 1897 (Fed. Cir. 1990) discussed in MPEP § 2144 are also pertinent to this issue.

As to claim 6: See col. 4, line 5. It would have been obvious to have the contacting time be more than a second and less than an hour, depending upon how much tubing is needed. For example if only 1000 meters were needed, it would have been obvious to run the process for only 200 seconds.

Claim 7: as chloride, it would have been obvious to use the amount necessary to get the desired effect. Finding the optimal concentration is an obvious matter of routine experimentation. It is well understood that concentration of reactant is a near-universal result-effective variable. As to the sample temperatures: the claim does not explicitly require either, thus it is deemed that the broadest reasonable interpretation is : if there is a lower sample temperature, then it is limited.... But since Geertman does not disclose any sampling, Geertman has no sample temperatures.

Claim 8, it is clear that the compound has the temperature at least at one location.

Claim 9 is clearly met.

Claim 10: Geertman's heat treatment is disclosed at col. 2, lines 29-30 and 61-62.

Art Unit: 1791

Claims 14-16 are met for the reasons given above.

Claim 17: it is deemed that a tube is a container. Claims 18-23 are met in as much as applicant's invention meets them.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 2, 6-10 and 14-17 and 19-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

There is no support for the limitation of providing an aluminum-modified structure in said surface .

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

Art Unit: 1791

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear how the temperature limitations of claim 7 is suppose to limit the claim. It is unclear if it means that the glass surface can never go below the "lower sample temperature", and never above 600 K above the transition temperature. In other words: the claim would exclude any method where the glass is ever cooled - to say room temperature. Or if claim 7 temperature limitation is suppose to be interpreted in a manner like claim 8 is interpreted - that it is an attempt to limit a processing temperature. As examiner understands it, claim 7 is attempting to point out theoretical limits, rather than any actual limits of the process. It is suggested that claim 7 only recite the contacting concentration.

### ***Response to Arguments***

Applicant's arguments filed 12/22/2009 have been fully considered but they are not persuasive.

It is argued that Geertman's gases "merely" result in deposition of layers on a glass surface, rather than modifying a glass surface. Applicant offers no rationale (or evidence to support) this assertion. It is noted that the present claims do not preclude



Art Unit: 1791

deposition of a layer, nor does the specification suggest that no layer of aluminum oxide is formed in combination with the modifying of the glass surface.

Examiner notes that the phrase "aluminum-modified structure" is not defined in the specification. Nor is it an art-recognized term. Thus it includes any sort of modification that was caused by aluminum in any way - including both a chemical modification, or a mechanical modification. For example, the coating modifies the surface from being a free surface to a non-free surface. It is also modified from being an unprotected surface to become a protected surface (col.2, lines 1-22.)

Applicant characterizes that Geertman is silent regarding the modification of the glass surface. Examiner disagrees, because "modification" is such a broad term; it encompasses any sort of change, including the coating of the surface. Examiner sees nothing in the present specification which suggests applicant intended the term "modification" to excluding the covering/coating modification of Geertman, or the protective modification of Geertman.

Moreover, since applicant and Geertman do substantially the same thing, one would expect the same chemical change to glass itself. That is aluminum ions are present on the surface at an elevated temperature. Since it appears that aluminum ions diffuse into the glass in the present invention, they would also diffuse in the glass in the Geertman invention. Why would aluminum ions diffuse into applicant's glass, but not the Geertman glass? If applicant does something special to permit diffusion, that

Art Unit: 1791

Geertman lacks, then there may be an issue of non-enablement because there is no guidance as to how to create the diffusion.

The fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). The fact that applicant realizes that exposure to aluminum chloride at an elevated temperature (such as is done in Geertman) results in aluminum diffusing into the glass, does not make the invention patentable.

The comments regarding the rejection under the written description requirement have been considered, however they do not address where the invention (as currently amended) is disclosed.

The remaining 112 – 2<sup>nd</sup> rejection is addressed by applicant by pointing to [0005]. Examiner finds that this does not make the claims definite. [0005] apparently discloses the theoretical upper and lower limits for the temperature one can use. But claim 7 fails to convey any temperatures actually used in the process. Thus it is confusing as to whether one should interpret claim 7 as stipulating actual temperatures used.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Thursday, roughly 9-5:30.

Art Unit: 1791

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

John Hoffmann  
Primary Examiner  
Art Unit 1791

/John Hoffmann/  
Primary Examiner, Art Unit 1791